

Opening Statement
Larry Blue
Vice President and General Manager
RFID Business Unit
Symbol Technologies
Before the Committee on Government Reform
September 29, 2005

Mr. Chairman and Mr. Ranking Member, thank you for the opportunity to testify today. And thank you for holding this very important hearing on how we can use information technology to improve the quality of health care in this country. This is an important topic for two reasons. First, because the well-executed deployment of information technology can help improve the quality of patient care in multiple ways. And second, because information technology can help hold down health care costs by streamlining the supply chain.

I'd like to focus my remarks today on two specific areas that highlight how IT solutions are being used today to improve care and reduce costs. The first involves using electronic patient records to reduce medical errors. The second involves using RFID to fight the rising tide of counterfeit drugs.

Before I go into those areas, let me first tell you a little about Symbol Technologies. Symbol manufactures handheld computers that scan barcodes and read RFID tags. We also manufacture wireless networks that tie together very complex asset management systems so information is available where it's needed in real time. We help our clients capture, move and manage information at the point of business activity. For most of our company's thirty-year history, our bread-and-butter has been asset management and inventory control. However, in recent years, these same tools are being used to dramatically improve the delivery of health care – by making critically important medical information available where it's needed – at a patient's bedside, in an operating room, or on a battlefield.

Reducing Medical Errors:

Medical errors are a very serious problem facing the health-care industry. Medical errors cause patient deaths and patient injuries, and they increase the lengths of hospitalizations:

- It has been estimated that adverse drug events – a patient receiving the wrong medication, or the wrong dose of the right medication – cause more than 770,000 injuries per year.
- The Institute of Medicine has estimated that the preventable death rate due to medical errors is between 44,000 and 98,000 per year.

In addition to the human suffering, medical errors are costly:

- The average insurance settlement resulting from a medical error is between \$400,000 and \$700,000.
- The costs of medical errors to a single hospital can run as high as \$5.6 million per year, depending on its size.

I was pleased to see that reducing medical errors is one of the central goals of the National Health Care Strategy.

The keys to reducing medical errors are first, converting patient records from paper to electronic records; and second, making accurate information available at a patient's bedside in real-time. Paper records are notoriously error-prone. Handwriting is hard to read, pages get lost, filing systems fall behind. The movement to electronic paper records is a priority for major health care providers, and justifiably so.

Once a medical center adopts electronic patient records, the next step is to adopt mobility technology so that information is available at a doctor's or nurse's fingertips anywhere in the complex. Patients move from hospital rooms to radiology centers to operating rooms – and their information has to follow them.

What some hospital systems are doing now is assigning a barcode to a patient when he or she checks in – it's put right on the patient's wristband. The medical staff is equipped with portable hand-held computers that read those barcodes and retrieve the patient's vital medical information from a central database. So for instance, when a nurse is making her rounds and stops in a patient's room one of the first things he/she does is to scan the barcode on the patient's wrist. The handheld then retrieves the patient's medical record that tells him/her the last time medicines were delivered, when the next dose is due, and exactly how much of which medicines to deliver. The nurse can deliver the medicine and immediately update the patient's record electronically. If the patient has to be moved to another ward or evacuated from a hospital as we saw with Katrina, the exact same information is available on their handhelds, and the information is tied to the patient through the barcode.

One of the organizations that is leading the way in implementing this type of mobility system is the Veterans Administration. They deserve an enormous amount of credit for tackling this challenge and improving patient care as a result. The VA hospitals have established a "Barcode Medication Administration System" that relies on a "Computerized Patient Record." Doctors and nurses are able to verify the time, dose and name of a patient receiving a medication, so the patient gets the right drug, in the right dose, at the right time. One of our partners, CareFusion, is working to implement these systems across every VA Hospital – and medication errors have been reduced significantly. 100 percent of VA Medical Centers are currently using barcode technology to positively identify patients and their medications. Adoption in commercial hospitals is estimated at less than 20 percent.

Another one of our partners, McKesson Corporation, utilizes our technology to implement a system similar to the VA's in private hospitals. They estimate that more than 44 million medications are scanned at the bedside every year. And each week, hospitals nationwide prevent an estimated 56,000 medication errors and issue more than 400,000 alerts to hospital staff of potentially harmful drug interactions.

One of the most significant barriers to hospitals implementing this type of system has been the lack of a uniform barcode on medications. Up to now, health care providers have had to develop their own barcodes and apply them to drug packages, which is costly and time-consuming. The FDA's new regulations requiring barcodes on all medications by April 2006

should make these systems much easier to implement. It is important that this initiative stay on schedule, and I would encourage your strong support for it.

Counterfeit Drugs:

Another serious problem is counterfeit prescription drugs – not only here in the United States, but around the world:

- The Pharmaceutical Security Institute estimated that \$200 million in U.S. prescriptions in 2003 were counterfeit – a sevenfold increase over the previous year.
- The World Health Organization estimates that counterfeit drugs are a \$32 billion global business.
- The San Diego Center for Patient Safety says that 8 to 10 percent of prescription drugs around the world are fake.

Counterfeit drugs are dangerous. The manufacturing process is unregulated. The purity is unknown. The dose is unreliable. New technologies are being employed to combat counterfeit drugs, and one of them is RFID. RFID stands for radio frequency identification. It is the next generation of barcode, or a talking barcode. A tiny computer chip attached to an antenna is placed on a product. When it is activated by a reader, it transmits a serial number or unique identifier to an authorized device. That number is then used to retrieve information from a secure database.

The FDA and private industry are aggressively developing electronic track-and-trace systems using RFID to stop counterfeiting. The goal of these systems is to create an “electronic pedigree” for legitimate drugs – (date and place of manufacture, chain of custody, etc.), that can be verified at any point in the distribution system. It is one of many tools under development that will make it more difficult for illegitimate companies to produce counterfeit drugs. Symbol Technologies is actively working with Purdue Pharmaceuticals to develop such a system for Oxycontin, which is one of the top 32 counterfeited medications. We’re optimistic that this RFID-based system is going to create a real barrier to that black market.

Standards are the Key to Interoperability:

Information technologies can be used in many ways to make health care better, safer, and more affordable. I’ve touched on just two of these today. For these systems to be effective, they have to be interoperable. And to be interoperable, we need industry-wide standards. Without such standards, one company’s readers won’t read another company’s tags, and so on. For example, if we’re going to have an effective RFID track-and-trace system to prevent counterfeit drugs, it has to be uniform from one country to the next. An RFID antenna in Mexico City has to be able to read an RFID tag placed on a bottle of pills in London. The electronic code for Lipitor, for example, has to be the same in the United States as it is in Australia. This is a tremendous challenge.

In some cases, industry has done a very good job in working together to produce widely-accepted standards. In other cases, it’s important for the government to play a leadership role. In my industry, I have worked to develop industrywide standards for RFID and electronic product codes. It isn’t always easy. Sometimes it’s a long difficult process. But standardization

is critical to widespread implementation of a new technology. It can mean the difference between one hospital having an electronic patient record, and that hospital being able to share that record with any other health-care provider in the area.

As the economy has become a global economy, it's now more important than ever for those standards to be global. So many products that are used in one country are made in another. Standards for supply chain technology must stretch beyond borders to be effective.

This is one area where Congress and the Administration can help us. The United States should work with other governments to help them understand the value of working together on standards. It is in their long-term interest, as well as ours, to develop uniform standards that will speed international commerce and make it more secure. If the Federal government can reinforce the message that cooperation on standards is a high priority, that would be very helpful.

In addition, continuing efforts like that of the FDA to set standards for barcoding of prescription drugs that all manufacturers can follow will help speed up the implementation of valuable health care IT systems.

Thank you again for the opportunity to testify today. I'd be happy to answer any questions you may have.